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STUDY, DISPLAY, AND INTERPRETATION OF THE FAUNA,
FLORA, AND PREHISTORIC LIFE OF THE PACIFIC COAST

MUSEUM TALK



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SANTA BARBARA MUSEUM OF NATURAL HISTORY

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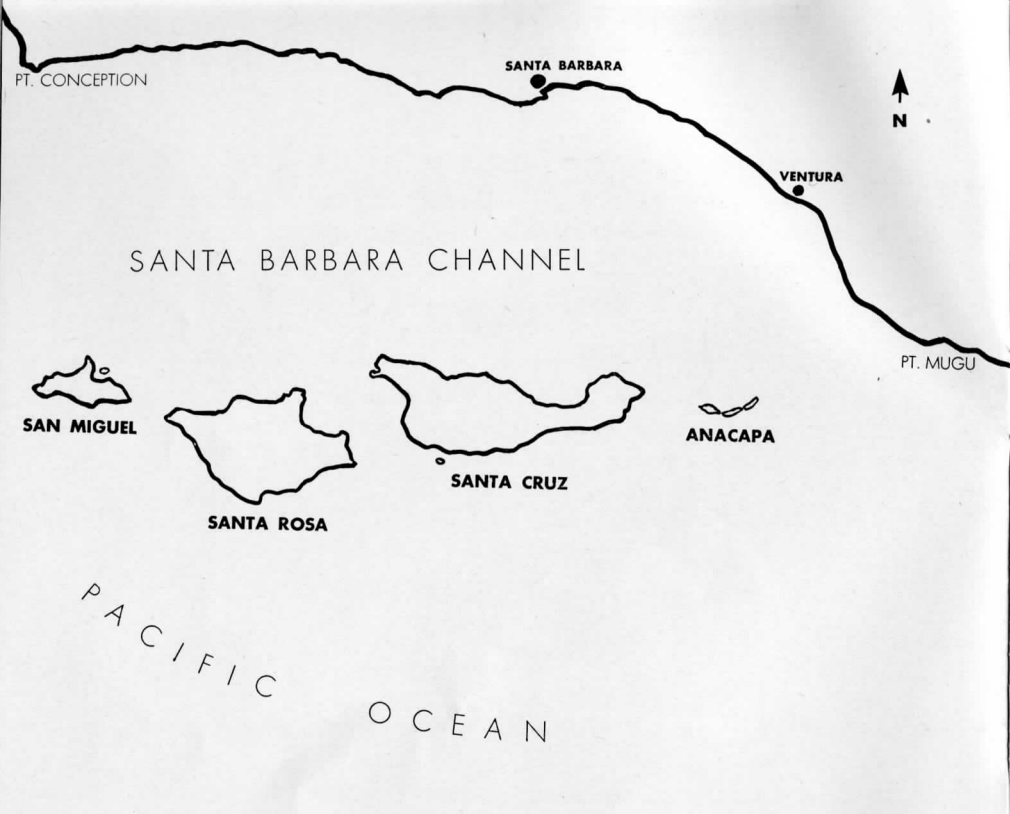
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The Orca at West Anacapa Island

THE ORCA GOES UNDERGROUND

As the research ship Orca of the Sefton Foundation of San Diego dropped anchor in Santa Barbara Harbor the first of June, a big four-wheel drive truck labeled "National Speleological Society," escorted by the Museum jeep, pulled up at the breakwater and proceeded to unload. Soon several conventional cars arrived with more scientists and gear.



THE SANTA BARBARA ISLANDS, SOUTHERN CALIFORNIA

"What in the world!" wondered people on the breakwater as microscopes, diving helmet, cameras, batteries, picks and plant presses were loaded into a skiff and ferried out to the Orca.

The Orca is dedicated by her Master, Joseph W. Sefton, Jr., to scientific research in coastal waters from Santa Barbara to Mexico and the writer has been fortunate to have joined her expeditions at least once a year. ("Island Hopping," a story about one of these trips, appeared in MUSEUM TALK, Spring 1949.)

This time it was the Sefton Speleological Expedition. To save you looking it up, speleology means the study of caves. This expedition, the culmination of about ten years planning on the part of the writer, was made possible by the generosity of Mr. Sefton and the co-operation of the National Speleological Society through Ed Danehy and Art Lange of the Stanford Grotto, and Walt Chamberlin of the Southern California Grotto. Botanist Dr. C. H. Muller, zoologist Dr. Don Wootton and students Charles Stasek and Charles Judson, all of Santa Barbara College, the writer and R. S. Finley, of the Museum staff, completed the scientific crew.

Our purpose was to investigate the sea caves of Anacapa and Santa Cruz Islands—to map them, determine their size and to investigate the cave life.

Caves of the islands have been known since 1890, when Lorenzo Yates described several. Other writers have mentioned or described some of them but apparently few have actually visited them. Four caves had been recorded for the Anacapas, but we found fifty.

Captain Kandy set a course for the west island of Anacapa, then cruised in close to shore. With Art Lange and the writer at the maps and notes, Dick Finley and Walt Chamberlin handling color and black and white cameras and the remainder of the crew with binoculars, we made a preliminary survey of the west, middle and east islands of Anacapa.

Anchoring at Fisherman's Camp on West Island we worked out with small boats and a canoe, entering the sea caves, measuring, mapping, photographing, collecting minerals and algae, and observing marine life.

The most interesting cave is on West Island. Dr. Yates mentioned it in 1890, so we named it Yates Cave.



In Yates Cave, West Anacapa Island

This huge room, hollowed out by wave action along a fault plane, measures 200 feet across with an arched ceiling 100 feet high. Water occupies most of the cave and a forty-foot boat could ride at anchor in it. At each end is a pebble beach.

The remarkable coloring on the roof and walls is a blending of the yellows, greens and browns of algae and minute crystals of aragonite.

Sea Lion Cave, also on West Island, must be entered by its six-foot tunnel at low tide or during periods of no surge, for the ceiling is too low to risk being smashed

against it by a heavy wave. The tunnel goes back a hundred feet, then turns to the left.

The heavy resonance of sea lions barking within the cave is depressing to the ear and makes one wonder if one of these five hundred-pounders will land in the boat. However, they gathered on the little beach at one end of the cave and posed for flashlight pictures and, while some made frantic efforts to escape, none landed in the skiff.

Keyhole Cave, which we named for its shape, looked enticing and the writer attempted twice to enter it in a canoe but waves ten to fifteen feet high at its mouth prevented even a peek.

Abalone Cave on Middle Island is small, with barely room for a skiff. It is the only cave in which we found live abalones.

Weather, as usual on the islands, was bad. North-west winds kept the channel in a choppy condition and ground swells dashed on the rocks and completely filled the smaller caves, so we weighed anchor and coasted along the north shore of Santa Cruz Island from San Pedro Point, on the east end, to West Point.

More than a hundred caves were located in this distance. After a hazardous attempt off Coche Point to investigate caves in what looked like a sheltered spot, we anchored in Pelican Bay where a shore party collected plants, lizards, mollusks and minerals. Another small party in a boat investigated Algae Cave, a small cave in a protected cove. Its walls and ceiling were coated with a brilliant red algae, a species of *Rhodochorton* first known from McKinnon's Tomb in Scotland and found in Finley Cave last year by the Museum's San Miguel Island Expedition. We found this algae again later in Babys Cave and Sponge Cave.

High winds prevented us from making investigations of any but the more sheltered caves, so while the Orca went off on a porpoise hunt, the speleologists went ashore at Ladys Harbor which, with its companion, Babys Harbor, form one of the nicest spots to be found on the islands. The deep blue waters of the two harbors meet the beach where a steep rocky canyon comes from the hills. A running stream is banked with ferns and mosses and the little island tree frogs play in the pools.

Babys Cave is located on the point of rock separating the two harbors and can only be entered by boat. The ceiling is covered with red algae and the water within the cave is indirectly lighted by hidden underwater passages to the outside, so that the water along the edges of the rock gives off a soft greenish glow.

Sponge Cave, to the west of this, is entered through an opening just large enough to take a skiff. The roof is supported by pillars and our boat floated in the narrow passage, going into total darkness for a hundred feet and then the light of our flashes no longer reached the walls. We seemed in the middle of nowhere, until our eyes became accustomed to the dim light and we saw a large room with another larger passage leading back into the mountain.

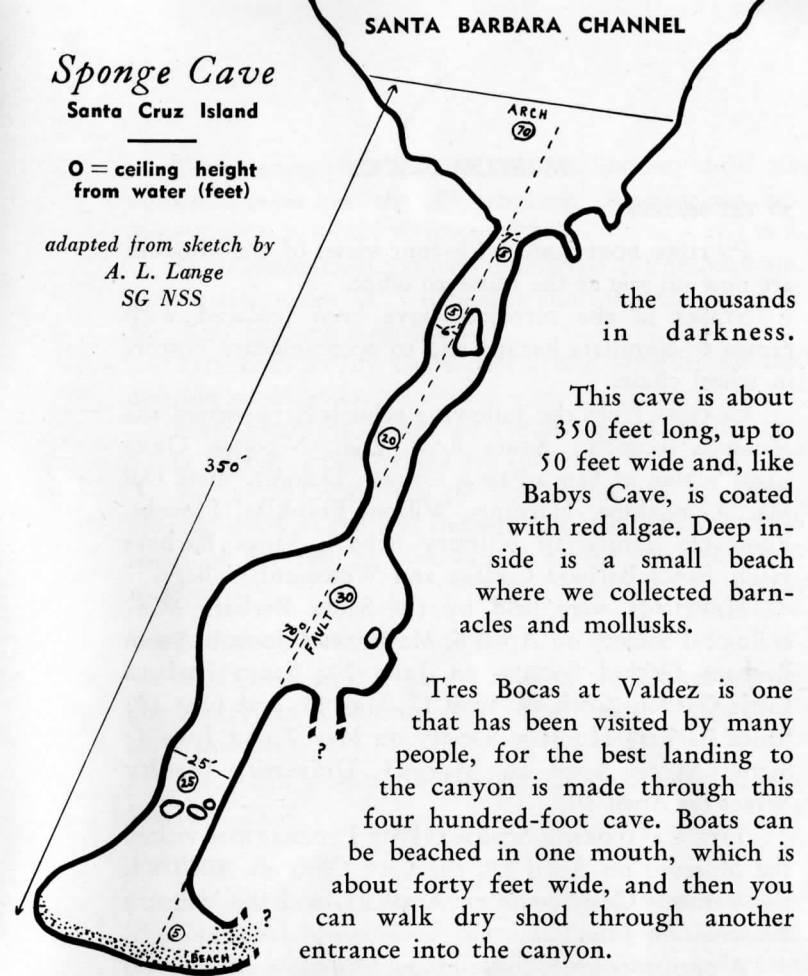
With our flashlights we could see the bottom of this passage four to twenty feet below us through the crystal-clear water and the rocks were covered with brilliant white objects of many sizes. Wondering what they were, we tried probing with an oar until Dick Finley went overboard to wade in the cold water, hoping a moray eel wouldn't come out of a crevice. He brought up small white sponges that live here by

Sponge Cave

Santa Cruz Island

O = ceiling height
from water (feet)

adapted from sketch by
A. L. Lange
SG NSS



the thousands
in darkness.

This cave is about
350 feet long, up to
50 feet wide and, like
Babys Cave, is coated
with red algae. Deep in-
side is a small beach
where we collected barn-
acles and mollusks.

Tres Bocas at Valdez is one
that has been visited by many
people, for the best landing to
the canyon is made through this
four hundred-foot cave. Boats can
be beached in one mouth, which is
about forty feet wide, and then you
can walk dry shod through another
entrance into the canyon.

Nearby is a dry gulch which is concealed from land
and sea, but which opens only through a short tunnel
—just the place for small boys to play pirate and for
big ones to be speleologists.

P. C. Orr

(Photos by Walter S. Chamberlin)